

#5,832,969, applicant understands the examiner's 35 USC § 112, 1<sup>st</sup> paragraph rejection to be based solely on the perceived new matter of a "non-cavitation bubble creation apparatus". Thus applicant's remarks in regards to the examiner's 35 USC § 112, 1<sup>st</sup> paragraph rejection shall be directed to the perceived new matter. Applicant respectfully traverses the examiner's rejection on the basis that the addition of the prefix "non-cavitation" does not constitute the addition of new matter. Applicant respectfully points out that the category of bubbles can be subdivided into two very distinct subcategories of bubbles, namely: 1) Conventional bubbles which are spheres of thin typically liquid film containing gases such as common air. Such conventional or "positive" bubbles are typically referred to merely as "bubbles". And 2) Non-conventional, or cavitation bubbles which are voids or "cavities" of gases such as common air which are enclosed within an otherwise substantially homogenous liquid. Such non-conventional or "negative" cavitation bubbles are typically referred to merely as "cavitation". The conventional bubble creation device disclosed in applicant's application as well as the conventional bubble creation devices disclosed in US patents 5,246,046, 5,495,876, and 5,832,969 are designed to create convention bubbles. Applicant believes applicant's originally filed specification to fully and adequately describe to one skilled in the art, the method of creating the above described conventional bubbles. Thus, applicant's amendment which added the prefix of "non-cavitation" to the description of a "bubble creation device", merely more narrowly defined applicant's previously described invention from an invention that might be construed broadly to create both conventional and non-conventional bubbles to an invention that is understood specifically to create only conventional bubbles. Or in other words, the prefix of "non-cavitation" adds nothing new, and simply gives up the second subcategory of non-conventional bubbles. This narrowing of definition does not constitute the addition of new matter.

Item 2 & 3, 35 USC § 102 rejection: Applicant respectfully traverses the examiner's rejection on both the basis that D'Andrade reference does not have a "non-bubble liquid emitting device", and on the basis that the D'Andrade reference does not have **both** an "automated bubble

producing device" 51 and a "liquid emitting device" 31. In regards to the first basis, applicant respectfully points out that the category of fluids can be subdivided into two very distinct subcategories of fluids, namely: 1) Gases, such as are the subject matter of pneumatics. And 2) Liquids, such as are the subject matter of hydraulics. The D'Andrade reference discloses an impeller 31 which moves or emits air but not liquid. As air would fall into the both the broader category of fluid or the narrower subcategory of gas, the D'Andrade reference may be seen as having either a "fluid emitting device" or a "gas emitting device" by virtue of feature 31 but the D'Andrade reference is not seen as having a "liquid emitting device" by virtue of feature 31. D'Andrade's "fluid emitting device" or "gas emitting device" is far removed from the teaching of applicant's "non-bubble liquid emitting device" which is a device that emits a stream of flowing water. While the D'Andrade reference may be construed to have a "liquid emitting device" by virtue of the "automated bubble producing device" 51, such conventional bubbles are also far removed from applicant's "non-bubble liquid emitting device" which is a device that emits a stream of flowing water. In regards to the second basis, as applicant has disclosed "... an automated non-cavitation bubble producing device **connected to** a non-bubble liquid emitting device", applicant has disclosed and claimed a discreet and separate bubble creation device (i.e. conventional bubbles) **and** a non-bubble liquid emitting device (i.e. streams of flowing water). As was originally noted in applicant's specification, in certain embodiments, both the bubble creation device and the non-bubble liquid emitting device can be operated independently of each other. In the D'Andrade reference, the only so-called liquid emitting device is the bubble creation device 31 itself. Thus D'Andrade fails to teach a liquid emitting device in addition to a bubble creation device.

Item 2 & 4, 35 USC § 102 rejection: Applicant respectfully traverses the examiner's rejection on the basis that Henkin reference does not disclose or contemplate the emission of non-cavitation type bubbles. Again, applicant respectfully points out that the category of bubbles can be subdivided into two very distinct subcategories of bubbles, namely: 1) Conventional

bubbles which are spheres of thin typically liquid film containing gases such as common air. Such conventional or "positive" bubbles are typically referred to merely as "bubbles". And 2) Non-conventional, or cavitation bubbles which are voids or "cavities" of gases such as common air which are enclosed within an otherwise substantially homogenous liquid. Such non-conventional or "negative" cavitation bubbles are typically referred to merely as "cavitation". Applicant's conventional bubble creation device is designed to create conventional bubbles. Applicant's bubble creation device does not contemplate or have provision for the creation of cavitation type bubbles. Conversely, the only so called bubbles that the Henkin device teaches, contemplates, or has provision for is cavitation. The Henkin device does not teach the emission of non-cavitation bubbles. Henkin's "cavitation" bubbles are "negative" bubbles whereas applicant's "non-cavitation" bubbles are positive bubbles. Thus applicant believes that the structural limitation of "non-cavitation" bubbles distinguishes over the Henkin reference.

As applicant believes the above explanations to clearly and distinctly address all issues brought forth by the examiner and as applicant believes the claims to be patentably distinct over all prior art and in condition for allowance, applicant requests allowance of the claims as filed.

DATE: December 29, 1998

Respectfully submitted,



Michael R. Schramm